CHECKLIST ENVIRONMENTAL ASSESSMENT

Proposed Action: Approve Drilling Permit (Form 22)
Project/Well Name: Great White 23-10-2H
Operator: MorningStar Operating, LLC
State: Montana
Location: SESW T22N R59E Sec. 23
County: Richland
Field (or Wildcat): Wildcat
Proposed Project Date: TBD

I. DESCRIPTION OF ACTION

Triple derrick drilling rig to drill a single lateral horizontal Bakken Formation test, 26,176' MD/10,396' TVD.

II. PROJECT DEVELOPMENT

A. PUBLIC INVOLVEMENT, AGENCIES, GROUPS, OR INDIVIDUALS CONTACTED

10 days from public notification opportunity to protest for hearing:
- Published in Helena Independent Record on 3/5/2026.
- Published in the Sidney Herald on 3/7/2026.

No written demand for hearing has been filed per ARM 36.22.601 as of 3/17/2026.

Montana Bureau of Mines and Geology, GWIC website (Richland County Wells).

US Fish and Wildlife, ENDANGERED, THREATENED, PROPOSED AND CANDIDATE SPECIES MONTANA COUNTIES, Richland County

Montana Natural Heritage Program Website (FWP)
Heritage State Rank= S1, S2, S3, T22N R59E

Montana Cadastral Website
Surface Ownership and surface use Section 23 T22N R59E

Montana Department of Natural Resources MEPA Submittal

USDA Natural Resources Conservation Service-Soils Map

B. ALTERNATIVES CONSIDERED

No Action Alternative: Permit to drill the well would not be issued by BOGC.

Action Alternative: Referred to the BOGC for further environmental review.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

A. AIR QUALITY

Long drilling time: No, 10-20 days.
Unusually deep drilling (high horsepower rig): No
Emission sources: Vehicles traveling on county road to location, combustion engines on location during drilling operations. Fugitive dust from traveling operations and location during active drilling.
Possible H2S gas production: Potentially in Mississippian formations.
In/near Class I air quality area: No.
Air quality permit for flaring/venting (if productive): Yes, DEQ air quality permit required under 75-2-211. AQB review.
Comments: No special concerns – Triple derrick drilling rig to drill a single lateral horizontal Bakken Formation test, 26,176' MD/10,396' TVD. If there are no gas gathering systems nearby, associated gas can be flared under Board Rule 36.22.1220.

B. WATER QUALITY

Salt/oil-based mud: Steel surface casing hole will be drilled with freshwater and freshwater mud system to 2000', Rule 36.22.1001. Will drill with oil-based invert drilling fluids for the intermediate casing hole. Horizontal hole will be drilled with saltwater.
High water table: No.
Surface drainage leads to live water: Location is near headwaters leading to an unnamed ephemeral drainage approximately 2420' to the west.
Water well contamination: There are 11 monitoring wells and one stockwater well within a ½ mile radius. Please see attached page for information on these wells. The surface hole will be drilled with freshwater and freshwater mud to 2000' and steel surface casing will be run and cemented back to the surface to protect groundwater.
Porous/permeable soils: No, silty clay loam and bedrock.
Class I stream drainage: None.
Groundwater vulnerability area: No.

Mitigation:

__ Lined reserve pit
X Adequate surface casing
__ Berms/dykes, re-routed drainage
X Closed mud system
X Off-site disposal of solids/liquids (in approved facility)
__ Other:

Comments: Steel surface casing will be run to 2000' and cemented back to surface to protect freshwater zones (Fox Hills aquifer) in adjacent water wells, Rule 36.22.1001. Adequate surface casing and BOP equipment to prevent problems, (5,000 psi annular and double ram), Rule 36.22.1014.

C. SOILS/VEGETATION/LAND USE

Vegetation: Badlands.
Stream crossing: None anticipated.
Erosion potential: High, cut of up to 28.2' and fill of up to 17.1'.
Loss of soil productivity: No, location will be restored after drilling if unproductive.
Unusually large wellsite (Describe dimensions): A well site of 435'X 400' required for a two-well pad.
Damage to improvements: No.
Conflict with existing land use/values: None, badlands.

Mitigation:

_ _ Avoid improvements (topographic tolerance)
__ Exception location requested
_X_ Stockpile topsoil
__ Stream Crossing Permit (other agency review)
_X_ Reclaim unused part of wellsite if productive
_ _ Special construction methods to enhance reclamation

Access road: From junction of S Central Ave south of Sidney, MT and MT-23 E, travel southeast, then east, then northeast approximately 3.6 miles to an existing road to the southeast. Turn right and proceed southeast for approximately 0.2 miles to an existing road to the west. Turn right and proceed west, then southwest, then south for approximately 1 mile to the beginning of a 480' proposed access road.
Drilling fluids/solids: MorningStar Operating, LLC will not be utilizing a drilling pit. Drilling fluids and solids will be transported to a state approved disposal facility.
Comments:

D. HEALTH HAZARDS/NOISE

Proximity to public facilities/residences: There are no occupied structures within a ¼ mile radius. The closest occupied structure is approximately 1.07 miles north in SESW Section 14 T22N R59E.
Possibility of H2S: Possibility in Mississippian formations.
Size of rig/length of drilling time: 10-20 days.

Mitigation:

_X_ Proper BOP equipment
__ Topographic sound barriers
__ H2S contingency and/or evacuation plan
__ Special equipment/procedures requirements
__ Other:

E. WILDLIFE/RECREATION

Sage Grouse: No.
Proximity to sensitive wildlife areas (DFWP identified): None.
Proximity to recreation sites: None.
Creation of new access to wildlife habitat: No.
Conflict with game range/refuge management: No.
Threatened or endangered species within 5 miles: Loggerhead Shrike, Red-headed Woodpecker, Great Blue Heron, Least Tern, Black-billed Cuckoo, Bobolink, Chimney Swift, Bald Eagle, Long-billed Curlew, Townsend's Big-eared Bat, Long-eared Myotis, Black-tailed Prairie Dog, Meadow Jumping Mouse, North American Snapping Turtle, Spiny Softshell, Greater Short-horned Lizard, Pallid Sturgeon, Shortnose Gar, Blue Sucker, Sicklefin Chub, Paddlefish, Sturgeon Chub, Sauger, Stylurus intricatus, Polygonia progne, and Macdunnoa nipawinia.

Mitigation:

__ Avoidance (topographic tolerance/exception)
__ Other agency review (DFWP, federal agencies, DNRC Trust Lands)
__ Screening/fencing of pits, drillsite
__ Other:

Comments: Badlands. There may be species of concern that may be impacted by this wellsite. We ask the operator to consult with the surface owner as to what he would like done if a species of concern is discovered at this location. The Board of Oil & Gas has no jurisdiction over private surface lands. No concerns.

IV. IMPACTS ON THE HUMAN POPULATION

A. HISTORICAL/CULTURAL/PALEONTOLOGICAL

Proximity to known sites:

Mitigation:

__ Avoidance (topographic tolerance, location exception)

__ Other agency review (SHPO, DNRC Trust Lands, federal agencies)

Other: The Board of Oil & Gas has no jurisdiction over private surface lands.

B. SOCIAL/ECONOMIC

Substantial effect on tax base:

__ Create demand for new governmental services

__ Population increase or relocation

Comments: No concerns.

IV. SUMMARY

No long-term impacts expected. Some short-term impacts will occur but can be mitigated.
I conclude that the approval of the subject Notice of Intent to Drill (does/**does not**) constitute a major action of state government significantly affecting the quality of the human environment, and (does/**does not**) require the preparation of an environmental impact statement.

EA Checklist Prepared By:	**Name:**	Allison YoungSwallow	**Date:**	4/29/2026
	Title:	Compliance Technician		

There is a monitoring well approximately 684’ east with a total depth of 181’ and static water level of 161.8’. There is a monitoring well approximately 693’ west with a total depth of 185’ and static water level of 160.8’. There is a monitoring well approximately 853’ northwest with a total depth of 242’ and static water level of 209.3’. There is a monitoring well approximately 1278’ southwest with a total depth of 175’ and static water level of 171’. There is a monitoring well approximately 1297’ south with a total depth of 117’ and static water level of 115’. There is a monitoring well approximately 1345’ northwest with a total depth of 242’ and static water level of 209.3’. There is a monitoring well approximately 1536’ east with a total depth of 146’ and static water level of 130.6’. There is a monitoring well approximately 1926’ east with a total depth of 117’ and static water level of 107’. There is a monitoring well approximately 2033’ northeast with a total depth of 174’ and static water level of 158.85’. There is a monitoring well approximately 2059’ north with a total depth of 236’ and static water level of 201.3’. There is a monitoring well approximately 2429’ north with a total depth of 140’ and static water level of 114.34’. There is a stockwater well approximately 2542’ east with a total depth of 1233 and static water level of -120.1’.